

What is claimed is:

1. A block-type building stone as a building material for walls such as soundproof walls and building walls, the building stone comprising:
  - an outside face;
  - an inside face; and
  - a three-layered structure, the three-layered structure including an outer layer forming the outside face, a middle layer made from insulating mortar with high thermal performance that has at least 70 volume percent (related to the volume of the middle layer) of recycled, granular polyurethane and cement as a binder, and an inner layer that forms the inside face and preferably comprises cement as the binder.
2. The block-type building stone as set forth in claim 1, wherein the width of the middle layer is greater than the width of the outer layer and is greater than the width of the inner layer, preferably the middle layer has a thickness that is at least twice, more specifically, three times the thickness of the outer layer, the inner layer or the outer layer and the inner layer.
3. The block-type building stone as set forth in claim 1, wherein the outer layer is thinner than the inner layer.
4. The block-type building stone as set forth in claim 1, wherein the concrete from which the outer layer is made is a standardized concrete such as CEM I 52.5, CEM I 42.5 or CEM I 32.5.
5. The block-type building stone as set forth in claim 1, wherein the middle layer comprises 90 to 94 volume percent of recycled hard polyurethane that has been shredded to form a mixture of powder and granules having a grain size of less than 8 mm and 6 to 10 volume percent of cement, more specifically, 92 volume percent of recycled hard polyurethane and 8 volume percent of cement, each relative to the volume of the middle layer.

6. The block-type building stone as set forth in claim 1, wherein the thickness of the outer layer ranges between 4 and 15 cm, more specifically between 8 and 12 cm.
7. The block-type building stone as set forth in claim 1, wherein the middle layer, the inner layer or the middle layer and the inner layer have an open pore structure.
8. The block-type building stone as set forth in claim 1, wherein the building stone comprises an upper face and a bottom face and at least one projection on the upper face, and the bottom face defines a recess that is at least as large as the at least one projection on the upper face and conforms to the shape of the at least one projection.
9. The block-type building stone as set forth in claim 1, wherein the building stone comprises a front and a rear end surface that are both level.
10. The block-type building stone as set forth in claim 1, wherein the outside face, the inside face or the outside face and the inside face are level surfaces.
11. The block-type building stone as set forth in claim 1, wherein the building stone is 0.4 to 2.5 m in length.
12. The block-type building stone as set forth in claim 1, wherein a strip-shaped material, more specifically, a rubber-type material, is provided that is interposed between two superposed block-type building stones.
13. The block-type building stone as set forth in claim 1, wherein the outer layer, the inner layer or the outer layer and the inner layer have no gaps.

14. A method of manufacturing a block-type building stone as set forth in claim 1 comprising the steps of:
  - introducing a bottom layer into a water permeable mould to form an outer layer or an inner layer;
  - mixing cement, polyurethane and water to produce a pourable mixture;
  - pouring the mixture onto the bottom layer already formed in the mould to produce a middle layer;
  - observing a waiting time wherein the cement does not yet harden and water flows out of the mould so that the layer thickness of the middle layer is reduced by at least 0.5 %, preferably by 2 to 5 %; and
  - applying an upper layer to form the outer layer or the inner layer.
15. The method as set forth in claim 14, wherein at least one of (i) the middle layer is applied onto the bottom layer while the bottom layer is still fresh, (ii) the upper layer is applied onto the middle layer while the middle layer is still fresh and (iii) the middle layer is applied onto the bottom layer while the bottom layer is still fresh and the upper layer is applied onto the middle layer while the middle layer is still fresh.
16. The method as set forth in claim 15, wherein the upper layer is applied by pressing parts such as bricks or rubble stones into the still fresh middle layer.
17. The method as set forth in claim 14, wherein, using normal hardening cement, the waiting time is at least 30 minutes and at most 5 hours.